

**REMARKS**

The Office Action mailed November 8, 2005, has been received and reviewed. Claims 1 through 6 are currently pending in the application.

Claims 1 through 6 stand rejected.

Applicant has amended claims 1, 3, and 5, and respectfully requests reconsideration of the application as amended herein.

**35 U.S.C. § 112 Claim Rejections**

Claims 1 through 6 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant has amended independent claims 1, 3, and 5 to particularly point out and distinctly claims the subject matter which Applicant regards as the invention to clearly comply with the provisions of 35 U.S.C. § 1.112, second paragraph, as the elements of the claimed inventions clearly identify portions of each method.

**35 U.S.C. § 102(b) Anticipation Rejections**

**Anticipation Rejection Based on U.S. Patent No. 5,104,480 to Wojnarowski et al.**

Claims 1 through 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wojnarowski et al. (U.S. Patent 5,104,480). Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant asserts that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Turning to the Wojnarowski et al. reference, described is a laser ablation process substantially roughening the surface of polymer dielectrics on metal layers and used to repair

open traces in printed circuit structures. Nowhere in the Wojnarowski et al. reference is there any description whatsoever of scanning the wafer for any reason. Nor is there any suggestion in the Wojnarowski et al. reference that any scanning is inherent in the process of repair.

Applicant asserts that the Wojnarowski et al. reference does not and cannot anticipate the presently claimed inventions of presently amended independent claims 1, 3, and 5 under 35 U.S.C. § 102 because the Wojnarowski et al. reference does not identically describe, either expressly or inherently, the elements of the inventions in as complete detail as is contained in the claims. For instance, Applicant asserts that the Wojnarowski et al. reference does not describe the elements of the presently claimed inventions of presently amended independent claims 1, 3, and 5 calling for “finding irregularities to remove from the substrate by scanning the substrate to locate irregularities”, “roughening the surface of the substrate when removing”, “determining irregularities to remove from the substrate by scanning the substrate”, “roughening the surface of the substrate while removing irregularities”, and “locating irregularities to be removed from the substrate by scanning the substrate”. In contrast to the presently claimed inventions of presently amended independent claims 1, 3, and 5, the Wojnarowski et al. reference merely describes the ablation of polymer coatings on metal layers for the formation of circuits. Such is not the presently claimed inventions.

While it is asserted in the Office Action that scanning is inherent in the Wojnarowski et al. reference process, there has been no explanation regarding any reason that scanning is inherently present in the process. Only a mere assertion has been made which is speculative. Applicant requests the citation of prior art to illustrate that scanning is present in any such repair process.

Therefore, presently amended independent claims 1, 3, and 5 are allowable as well as dependent claims 2, 4, and 6 therefrom.

Anticipation Rejection Based on U.S. Patent No. 4,894,115 to Eichelberger et al.

Claims 1 through 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Eichelberger et al. (U.S. Patent 4,894,115). Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant again asserts that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Turning to the Eichelberger et al. reference, described is a process for forming holes in a desired pattern in a polymer dielectric layer scanned repeatedly with a high energy continuous wave laser. Nowhere in the Eichelberger et al. reference is there any description whatsoever of scanning the wafer for any reason but for forming a hole. Nor is there any suggestion in the Eichelberger et al. reference that any scanning is inherent in the process of anything but forming a hole.

Applicant asserts that the Eichelberger et al. reference does not and cannot anticipate the presently claimed inventions of presently amended independent claims 1, 3, and 5 under 35 U.S.C. § 102 because the Eichelberger et al. reference does not identically describe, either expressly or inherently, the elements of the inventions in as complete detail as is contained in the claims. For instance, Applicant asserts that the Eichelberger et al. reference does not describe the elements of the presently claimed inventions of presently amended independent claims 1, 3, and 5 calling for “finding irregularities to remove from the substrate by scanning the substrate to locate irregularities”, “roughening the surface of the substrate when removing”, “determining irregularities to remove from the substrate by scanning the substrate”, “roughening the surface of the substrate while removing irregularities”, and “locating irregularities to be removed from the substrate by scanning the substrate”. In contrast to the presently claimed inventions of presently amended independent claims 1, 3, and 5, the Eichelberger et al. reference merely describes the formation of holes in a polymeric dielectric layers. Such is not the presently claimed inventions.

While it is asserted in the Office Action that scanning is inherent in the Eichelberger et al. reference process, there has been no explanation regarding any reason that scanning is inherently present in the process. Only a mere assertion has been made which is speculative. Applicant requests the citation of prior art to illustrate that scanning is present in any such repair process.

Therefore, presently amended independent claims 1, 3, and 5 are allowable as well as dependent claims 2, 4, and 6 therefrom.

Anticipation Rejection Based on U.S. Patent 5,504,303 to Nagy

Claims 1 through 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Nagy (U.S. Patent 5,504,303). Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant yet again asserts that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Turning to the Nagy reference, described is a process for measuring and smoothing a surface using an ablating laser, a profilometer laser, an automatic feedback control unit and electro-mechanical positioning apparatus. The thickness of a diamond sample is measured, compared to a desired thickness, and if thicker than desired, a laser is used to smooth the diamond surface by ablation. Nowhere in the Nagy reference is there any description whatsoever of scanning the diamond surface to roughen the surface when removing thick portions of the diamond surface. Applicant asserts that the Nagy reference description is opposite to the claimed inventions as it is directed to smoothing, not roughening. Nor is there any description in the Nagy reference of abating anything but a diamond material.

Applicant asserts that the Nagy reference does not and cannot anticipate the presently claimed inventions of presently amended independent claims 1, 3, and 5 under 35 U.S.C. § 102 because the Nagy reference does not identically describe, either expressly or inherently, the elements of the inventions in as complete detail as is contained in the claims. For instance, Applicant asserts that the Nagy reference does not describe the elements of the presently claimed inventions of presently amended independent claims 1, 3, and 5 calling for “finding irregularities to remove from the substrate by scanning the substrate to locate irregularities”, “roughening the surface of the substrate when removing”, “determining irregularities to remove from the substrate by scanning the substrate”, “roughening the surface of the substrate while removing

irregularities”, and “locating irregularities to be removed from the substrate by scanning the substrate”. In contrast to the presently claimed inventions of presently amended independent claims 1, 3, and 5, the Nagy reference merely smoothes a diamond surface. Such is not the presently claimed inventions. Therefore, presently amended independent claims 1, 3, and 5 are allowable as well as dependent claims 2, 4, and 6 therefrom.

Anticipation Rejection Based on U.S. Patent 5,711,698 to Chakraborty et al.

Claims 1 through 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Chakraborty et al. (U.S. Patent 5,711,698). Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant again asserts that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

*Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The identical invention must be shown in as complete detail as is contained in the claim.

*Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Turning to the Chakraborty et al. reference, described is a process for ablating a synthetic diamond having a pitted surface for smoothing the pitted surface using an ablating laser.

Nowhere in the Chakraborty et al. reference is there any description whatsoever of scanning the diamond surface to roughen the surface when removing portions of the diamond surface.

Applicant asserts that the Chakraborty et al. reference description is opposite to the claimed inventions as it is directed to smoothing, not roughening. Nor is there any description in the Chakraborty et al. reference of abating anything but a diamond material.

Applicant asserts that the Chakraborty et al. reference does not and cannot anticipate the presently claimed inventions of presently amended independent claims 1, 3, and 5 under 35 U.S.C. § 102 because the Chakraborty et al. reference does not identically describe, either expressly or inherently, the elements of the inventions in as complete detail as is contained in the claims. For instance, Applicant asserts that the Chakraborty et al. reference does not describe the elements of the presently claimed inventions of presently amended independent claims 1, 3, and 5 calling for “finding irregularities to remove from the substrate by scanning the substrate to

locate irregularities”, “roughening the surface of the substrate when removing”, “determining irregularities to remove from the substrate by scanning the substrate”, “roughening the surface of the substrate while removing irregularities”, and “locating irregularities to be removed from the substrate by scanning the substrate”. In contrast to the presently claimed inventions of presently amended independent claims 1, 3, and 5, the Chakraborty et al. reference merely smoothes a diamond surface. Such is not the presently claimed inventions. Therefore, presently amended independent claims 1, 3, and 5 are allowable as well as dependent claims 2, 4, and 6 therefrom.

### ENTRY OF AMENDMENTS

The amendments to claims 1, 3, and 5 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application to clearly comply with the provisions of 35 U.S.C. § 132. Further, the amendments do not raise new issues or require a further search.

### CONCLUSION

Claims 1 through 6 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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